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10/520,795	01/10/2005	Fabian Castro Castro	P17069US1	9966
27045	7590	08/07/2007		
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR 1-C-11 PLANO, TX 75024			EXAMINER KIM, HEE SOO	
			ART UNIT 2109	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

mn

# Office Action Summary

Application No.

10/520,795

Applicant(s)

CASTRO ET AL.

Examiner

Hee Soo Kim

Art Unit

2109

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 1/10/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Claims 21~40 are presented for examination.

#### **Priority**

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 1/10/2005 was filed after the mailing date of 1/10/2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

#### ***Inventorship***

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 21~24, 26, 27, 29, 31~34 rejected under 35 U.S.C. 103(a) as being unpatentable over Seymour (U.S Patent# 5,579,384) in view of Wilson (PGPub: 2002/0029298).

Regarding Claim 21,

Seymour teaches a management system for provisioning services to subscribers of a communication network, the management system comprising a Management Entity that has a Provisioning Node side intended for provisioning a service, and a number of Managed Entities each one having a Provisioned Node side intended for receiving provisioning orders from the Management Entity (Fig.1), wherein:

a. the Provisioning Node side and the number of Provisioned Node sides support a Subscription Management Generic Interface that includes a SuM-GI Data Model (Col. 3, Lines 42~ Col. 4, Lines 1~15 and Fig.1);

b. Provisioning Node side has a number of Protocol Adapters for communicating with specific protocol technologies used at each Managed Entity (Col. 4, Lines 16~34 and Fig.2);

c. Each Provisioned Node side has at least one Protocol Adapter for communicating with a particular protocol technology used by the Management Entity to send provisioning orders (Col. 4, Lines 16~34 and Fig.2);

Seymour does not disclose the management system further comprising a SuM-GI Manager on each provisioned node side, a SuM-GI Agent in the provisioning node side, and a Mapping Module in at least one Managed Entity in the provisioned node side. However, Wilson teaches a management system comprising a manager that manipulates the managed objects via an agent in the managed system. The managed system includes mapping between the managed objects and resources (Page 5, Par. [0060] and [0061]). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to modify and upgrade the management system of Seymour's with Wilson's system to:

1. provide the management entity to send management operations to the agents of the managed system.

2. agents manipulate the managed objects providing different views of one resource (model).

3. eliminate the need to collect images of the data model in each Network element to build a generic user data model.

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The upgrade allows the managing system not be aware of which managed systems handles which managed systems or which managed system functionality.

Regarding Claim 22,

Seymour and Wilson teaches the Subscription Management Generic Interface is arranged for holding specific attributes or characteristics of those objects included in the SuM-GI Data Model in a generic information placeholder associated to each particular object (Seymour: Col. 8, Lines 58~67; Wilson: Pg.5, Par [0062] ~ [0069]).

Regarding Claim 23,

Wilson further teaches the Subscription Management Generic Interface is arranged for allowing each individual SuM-GI Agent to determine whether or not each particular attribute in a list of attributes is applicable in the node where the SuM-GI Agent resides, the applicability depending on a specific internal data model in said node (Pg.5, Par [0062]).

Regarding Claim 24,

Wilson further teaches at least one Managed Entity is a Network Element in which a given service is provisioned, and wherein a number of Managed Entities may optionally form a hierarchical Sub-Network Manager structure interposed between a centralized Management Entity acting as a Network Manager, and a number of Network Elements, each Sub-Network Manager comprising:

a. a SuM-GI Manager, a SuM-GI Agent and a number of Protocol Adapters, thus presenting a Provisioned Node side towards a Provisioning Node side at a Network Manager or at another Sub-Network Manager, and a Provisioning Node Side towards a Provisioned Node side at a Network Element or at another Sub-Network Manager (Pg.5, Par [0062] ~ [0069]).

Regarding Claim 26,

Seymour and Wilson teaches the Subscription Management Generic Interface (SuM-GI) includes a SuM-GI Operation set intended to act on the SuM-GI Data Model and comprising any Operations, or combinations thereof, selected from groups of operations that include:

a. creating, modifying, removing and getting Subscriber (Seymour: Col. 5, Lines 9~43; Wilson: Pg.5, Par [0061]);

b. creating, modifying, removing and getting User (Seymour: Col. 5, Lines 9~43; Wilson: Pg.5, Par [0061]);

c. creating, modifying, removing and getting Provided Service (Seymour: Col. 5, Lines 9~43; Wilson: Pg.5, Par [0061]);

d. creating, modifying, removing and getting Subscription (Seymour: Col. 5, Lines 9~43; Wilson: Pg.5, Par [0061]);

e. adding, removing and getting User to or from a given Subscription (Seymour: Col. 5, Lines 9~43; Wilson: Pg.5, Par [0061]); and

f. setting and getting User Service Preferences for a user under a given Subscription (Seymour: Col. 5, Lines 9~43; Wilson: Pg.5, Par [0061]).

Regarding Claim 27,

Seymour teaches a Management Entity having a Provisioning Node side intended for provisioning a service towards a Network Element by sending provisioning orders, the Management Entity supporting a Subscription Management Generic Interface (SuM-GI) that includes a SuM-GI Data Model and suitable for use in the management system of claim 21, the Management Entity comprising:

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a. at least one Protocol Adapter for communicating with a specific protocol technology used at the Network element (Col. 4, Lines 16~34 and Fig.2);

Seymour's system does not disclose a SuM-GI Manager for sending provisioning orders to manage subscriptions to services in the Network Element with a number of SuM-GI Operations operating on Objects Classes included in the SuM-GI Data Model, and independently from an internal data model used by the Network Element. However, Wilson teaches ... (Page 5, Par. [0060] and [0061]). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to modify and upgrade the management system of Seymour's with Wilson's system to:

1. provide the management entity to send management operations to the agents of the managed system.
2. agents manipulate the managed objects providing different views of one resource (model).
3. eliminate the need to collect images of the data model in each Network element to build a generic user data model.

The upgrade allows the managing system not be aware of which managed systems handles which managed systems or which managed system functionality.

Regarding Claim 29,

Seymour teaches a Network Element where a service is provisioned to subscribers of a communication network, the Network Element suitable for being used as a Managed Entity in the management system of claim 21 and supporting a Subscription Management Generic Interface that includes a SuM-GI Data Model, the Network Element comprising:



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a. at least one Protocol Adapter for communicating with a particular protocol technology used by a Management Entity to send provisioning orders (Col. 4, Lines 16~34 and Fig.2);

Seymour does not disclose a SuM-GI Agent for receiving provisioning orders and a Mapping Module. However, Wilson teaches a management system comprising a manager that manipulates the managed objects via an agent in the managed system. The managed system includes mapping between the managed objects and resources (Page 5, Par. [0060] and [0061]). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to modify and upgrade the management system of Seymour's with Wilson's system to:

1. provide the management entity to send management operations to the agents of the managed system.

2. agents manipulate the managed objects providing different views of one resource (model).

3. eliminate the need to collect images of the data model in each Network element to build a generic user data model.

The upgrade allows the managing system not be aware of which managed systems handles which managed systems or which managed system functionality.

Regarding Claim 31,

Seymour teaches a method for provisioning services to subscribers of a communication network, the method applying between a Management Entity that has a Provisioning Node side intended for provisioning a service, and a number of Managed Entities each one having a Provisioned Node side intended for receiving provisioning

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orders from the Management Entity. Seymour discloses assigning a specific protocol technology but not explicitly for communication between a SuM-GI Manager and each SuM-GI Agent. Furthermore, Seymour does not disclose sending provisioning orders and determining at a SuM-GI Agent, upon receipt of a provisioning order from a SuM-GI Manager, whether current node is a Network Element (NE) where the service is provisioned or there is at least one lower hierarchical Managed Entity, namely a Sub-Network Manager or a Network Element, where the provisioning order must be submitted.

However, Wilson teaches management system comprising a manager that manipulates the managed objects via an agent in the managed system. The managed system includes mapping between the managed objects and resources (Page 5, Par. [0060] and [0061]). The management system also sends operations to a number of managed systems via the mediating managed systems (sub-network manager). These mediating managed systems can access all functionality provided by the total collection of mediating managed systems under maintenance of all protocol characteristics (Pg. 5, Par. [0068]~ [0069]). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to combine and upgrade the management system of Seymour's with Wilson's system to:

1. provide communication between the manager and agent according to the protocol utilized by the systems and
2. eliminate the need to collect images of the data model in each Network element to build a generic user data model.

The upgrade allows the managing system not be aware of which managed systems handles which managed systems or which managed system functionality with maintenance of all protocol characteristics.

Regarding Claim 32,

Wilson teaches upon receipt of a provisioning order from a Subscription Management Generic Interface Manager in a SuM-GI Agent at a Sub-Network Manager, the method further comprising the steps of:

a. transferring the provisioning order received from a first SuM-GI Manager at a Provisioning Node side of a Management Entity or higher hierarchical Managed Entity toward a second SuM-GI Manager at a Provisioning Node side of the current node (Pg. 5, Par. [0068]~ [0069]);

b. assigning a specific protocol technology for communication between the second SuM-GI Manager at the Provisioning Node side of the current node and each SuM-GI Agent at respective Provisioned Node sides of lower hierarchical Managed Entities (Pg. 5, Par. [0068]~ [0069]); and

c. sending provisioning orders from the second SuM-GI Manager toward at least one SuM-GI Agent at a Provisioned Node side of a lower hierarchical Managed Entity with a number of SuM-GI Operations intended for operating on Object Classes included in a SuM-GI Data Model (Pg. 5, Par. [0068]~ [0069]).

Regarding Claim 33,

Wilson teaches upon receipt of a provisioning order from a Subscription Management Generic Interface (SuM-GI) Manager in a SuM-GI Agent at a Network Element, the method further comprising the steps of:

a. mapping the provisioning order received from a SuM-GI Manager at a Provisioning Node side with a number of SUM-GI Operations intended for operating on Object Classes included in a SuM-GI Data Model into a number of internal operations intended for operating on an internal data model supported by the current Network Element (Pg. 5, Par. [0060]~ [0069]); and

b. acting on the internal data model with the mapped internal operation in order to carry out the provisioning order received from a SuM-GI Manager at a Provisioning Node side (Pg. 5, Par. [0060]~ [0069]).

Regarding Claim 34,

Seymour does not disclose receipt of a provisioning order from a Subscription Management Generic Interface Manager in a SuM-GI Agent at a Network Element for which resulting data is expected, including mapping the resulting data of an internal data model into appropriate parameters of a number of SuM-GI Operations and returning provisioning order results from the SuM-GI agent toward the SuM-GI Manager.

However, Wilson teaches mapping of the managed objects between the managed objects and resources, and returning provisioning order to the Manager with appropriate parameters in a number of SuM-GI Operations intended for operating on Object Classes included in a SuM-GI Data Model (Pg.5, Par [0060]~Pg.6, [0072]). Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to combine and upgrade the management system of Seymour's with Wilson's system to provide Seymour's SMS system to send orders from the agents of subscriber data based on the internal model to the Manager without the need for the

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managing system be aware of which managed systems handles which managed systems or which managed system functionality (subscription data). This will make the system extremely flexible and can be added in principle anywhere, in a distributed configuration.

Regarding Claim 36,

Wilson teaches the Subscription Management Generic Interface includes a SuM-GI Operation set intended to act on a SuM-GI Data Model and comprising any Operations, or combinations thereof, selected from groups of operations that include:

a. creating, modifying, removing and getting Subscriber (Seymour: Col. 5, Lines 9~43; Wilson: Pg.5, Par [0061]);

b. creating, modifying, removing and getting User (Seymour: Col. 5, Lines 9~43; Wilson: Pg.5, Par [0061]);

c. creating, modifying, removing and getting Provided Service (Seymour: Col. 5, Lines 9~43; Wilson: Pg.5, Par [0061]);

d. creating, modifying, removing and getting Subscription (Seymour: Col. 5, Lines 9~43; Wilson: Pg.5, Par [0061]);

e. adding, removing and getting User to or from a given Subscription (Seymour: Col. 5, Lines 9~43; Wilson: Pg.5, Par [0061]); and

f. setting and getting User Service Preferences for a user under a given Subscription (Seymour: Col. 5, Lines 9~43; Wilson: Pg.5, Par [0061]);

Regarding Claim 38,

Seymour and Wilson teaches the Subscription Management Generic Interface (SuM-GI) is arranged for holding specific attributes or characteristics of those objects

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included in the SuM-GI Object Model in a generic information placeholder associated to each particular object (Seymour: Col. 8, Lines 58~67; Wilson: Pg.5, Par [0062] ~ [0069]).

Regarding Claim 39,

Wilson teaches the Subscription Management Generic Interface (SuM-GI) is arranged for allowing each individual SuM-GI Agent to determine whether or not each particular attribute in a list of attributes is applicable in the node where the SuM-GI Agent resides, the applicability depending on a specific internal data model in said node (Pg.5, Par [0062]).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 25, 28, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seymour (U.S Patent# 5,579,384) and Wilson (PGPub: 2002/0029298) in further view

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of J.C-K. Lee et al. hereinafter Lee (Service Subscription Information Management in a TINA Environment using Object-Oriented Middleware).

Regarding Claim 25, 28, and 30,

While Seymour and Wilson both teach a management system based on subscription services, they do not explicitly disclose the specifics of the object classes in the data model. Seymour teaches the SMS SIPF (protocol interface) depending on the type of request decodes the appropriate attributes of the request. SIPF determines the specific action to be taken i.e. creating a new subscription. SIPF rules further must account for the type and version of Interface involved (Col. 5 Lines 9~3). Lee also teaches in this Subscription Management model the objects contain composite attributes i.e. service description attribute that contains the service ID, name and parameter lists. If the service is customizable the subscriber can apply preferred service settings described by the subscription profile to all its associated Subscription Assignment entities (Pg. 121~122, Section I and II:B). However, Lee teaches a service subscription information management in a TINA environment where the subscription model is specifically disclosed. It is obvious to one with ordinary skill that a TINA environment is simply an Intelligent Network (IN) merged with features of the Telecommunication Management Network (TMN) system. Lee teaches the subscription model wherein the subscriber enters into a subscription contract. The contract contains information regarding payment methods, billing, and personal information. After a contract is signed, subscribers are given an option to subscribe to one or more services. Subscribers signed up for given services are then outlined in the service profile (Pg. 121~122, Section I and II).

Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to incorporate Lee's subscription model to Seymour's and Wilson's management system to provide the management system be a distributed, flexible and scalable architecture/application.

Regarding Claim 35,

While Seymour and Wilson both teach a management system based on subscription services, they do not explicitly disclose the specifics of the object classes in the data model. However, Lee teaches a service subscription information management in a TINA environment where the subscription model is specifically disclosed. It is obvious to one with ordinary skill that a TINA environment is simply an Intelligent Network (IN) merged with features of the Telecommunication Management Network (TMN) system. Lee teaches the subscription model wherein the subscriber enters into a subscription contract. The contract contains information regarding payment methods, billing, and personal information. After a contract is signed, subscribers are given an option to subscribe to one or more services. Subscribers signed up for given services are then outlined in the service profile (Pg. 121~122, Section I and II).

Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention was made to incorporate Lee's subscription model to Seymour's and Wilson's management system to provide the management system be a distributed, flexible and scalable architecture/application.

Regarding Claim 37 and 40,

Seymour teaches the SMS SIPF (protocol interface) depending on the type of request decodes the appropriate attributes of the request. SIPF determines the specific



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action to be taken i.e. creating a new subscription. SIPF rules further must account for the type and version of Interface involved (Col. 5 Lines 9~3). Lee also teaches in this Subscription Management model the objects contain composite attributes i.e. service description attribute that contains the service ID, name and parameter lists. If the service is customizable the subscriber can apply preferred service settings described by the subscription profile to all its associated Subscription Assignment entities (Pg. 121~122, Section I and II:B).

### ***Conclusion***

**Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

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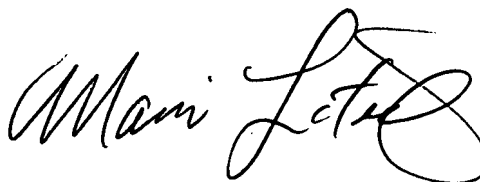
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hee Soo Kim whose telephone number is (571) 270-3229. The examiner can normally be reached on Monday - Friday 7:30AM - 5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marvin Lateef can be reached on (571) 272-5026. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HSK  
8/1/07

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A handwritten signature in black ink, appearing to read "Marvin Lateef", with a stylized, cursive script.

MARVIN LATEEF  
SUPERVISORY PATENT EXAMINER